

PATENT ABSTRACTS OF JAPAN

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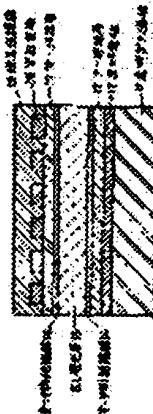
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(54) THIN FILM EL PANEL

(57)Abstract:

PURPOSE: To enhance the luminance intensity and reliability by forming an EL light emitting layer as a thin film made by multi-element vapor deposition method using a vapor source consisting of light emitting layer constituting elements, and forming insulation layers provided on both sides of the light emitting layer as a thin film made by atomic layer epitaxial method.

CONSTITUTION: A transparent first insulation layer 13 which is 200Å thick and made of Al₂O₃ and others formed by atomic layer epitaxy using raw materials such as AlCl₃ is formed on the surface of a transparent electrode 12. An EL light emitting layer 15, 6000Å thick, is provided being formed by multi-element vapor deposition method using for example multiple vapor source of Zn and S constituting light emitting mother material, and Mn to be a light emitting central layer, via a first intermediate insulation film 14 comprising Al₂O₃, Ta₂O₅, and others formed by sputtering or vapor deposition method. Back plates 18 at right angles to the transparent electrode 12 are disposed to form a matrix on the light emitting layer 15 via a second insulation layer which is 2000Å thick and comprising a second intermediate insulation film 16 and Al₂O₃, etc., formed by atomic layer epitaxial method.



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